

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A computer implemented data processing system, comprising:  
~~dimensional-a model generation-service~~ system configured to receive, as an input, an object model description, indicative of a first object model that represents business data, and generate a dimensional model based on the input;  
an entity generator generating a second object model based on the dimensional model, the second object model representing business data represented by the dimensional model; and  
a ~~data-navigation system-service~~ configured to identify a data navigation path from a relationships between individual sets of data that comprise the business data-, and output the data navigation path for navigation by a user from a first data set to a related second data set wherein the navigation service comprises:  
a plurality of navigation providers each associated with a specific type of navigation;  
a navigation service layer configured to transmit a navigation service request to one or more of the navigation providers that are registered with the navigation service layer; and  
a metadata service for providing the plurality of navigation providers with access to a metadata store, each navigation provider being configured to respond to a received data navigation request by interacting with the metadata service to identify at least one data navigation path and to return the at least one identified data navigation path to the navigation service layer for output to the user.
- 2.(Original) The system of claim 1 wherein the first object model represents transactional business data.
- 3.(Original) The system of claim 2 wherein the second object model represents aggregated business data.

4.(Currently Amended) The system of claim 3 wherein the data-navigation ~~system-service~~ identifies data navigation paths between the transactional and aggregated business data.

5. (Original) The system of claim 1 and further comprising:

a data accessing system providing an interface to access the business data through the second object model.

6. (Original) The system of claim 5 wherein the data accessing system is configured to receive an object oriented query expression expressed in terms of entities in the second object model, and wherein the data accessing system comprises:

a translation component configured to translate the object oriented query expression into a dimensional model query expression and execute it against the dimensional model.

7. Canceled.

8.(Currently Amended) The system of claim 1 wherein the object model description describes a relationship between entities in the first object model and wherein the ~~dimensional model generation-service~~ system comprises:

a dimensional model ~~generation-component~~construction system configured to receive, as inputs, the object model description, ~~and~~ a focal point identifier identifying information in the object model as a focal point, ~~and~~ a map system configured to receive, as an input, mapping information indicative of a mapping between entities in the first object model and a persistent data store.

9. Canceled.

10.(Currently Amended) The system of claim 9-1 wherein at least one of the plurality of data

navigation providers is associated with navigation from aggregated data to related transaction data.

11.(Currently Amended) The system of claim 9-1 wherein at least one of the plurality of data navigation providers is associated with navigation from transaction data to related aggregated data.

12. (Currently Amended) The system of claim 9-1 wherein at least one of the plurality of data navigation providers is associated with navigation between two data units that share a dimension.

13. (Currently Amended) The system of claim 9-1 wherein at least one of the plurality of data navigation providers is associated with hierarchical navigation through collections of data that are hierarchically organized.

14. (Currently Amended) The system of claim 9-1 wherein at least one of the plurality of data navigation providers is associated with navigation between two data collections that the user has identified as related.

15. (Currently Amended) ~~An architecture~~A system supporting analytical processing of transactional business data by an application, the architecture comprising:

a ~~design component~~system configured to receive a transactional object model description describing a transactional object model used in collecting the transactional business data and generate a dimensional model and an analytical programming object model from the transactional object model description, the analytical programming model representing data represented by the dimensional model and the transactional object model; and

a ~~runtime component~~navigation service configured to automatically identify navigable paths between data sets in the business data in the ~~architecture~~system and provide output the paths for navigation by a user wherein the navigation service is

configured to identify navigation paths among data sets in the transactional object model, the dimensional model and the analytical programming object model.-

16. Canceled.

17.(Currently Amended) The ~~architecture-system~~ of claim 15 wherein the runtime ~~component~~navigation service identifies data navigation paths between the transactional and analytical business data.

18.(Currently Amended) The ~~architecture-system~~ of claim 15 wherein the runtime ~~component~~navigation service further ~~comprising~~comprises:

a data accessing system providing an interface to access the business data through the analytical programming model.

19.(Currently Amended) The ~~architecture-system~~ of claim 18 wherein the data accessing system is configured to receive an object oriented query expression expressed in terms of entities in the analytical programming model, and wherein the data accessing system comprises:

a translation component configured to translate the object oriented query expression into a dimensional model query expression and execute it against the dimensional model.

20.(Currently Amended) The ~~architecture-system~~ of claim 15 wherein the transactional object model description describes a relationship between entities in the transactional object model and wherein the ~~dimensional model generation~~design system comprises:

a ~~dimensional model generation component~~model service configured to receive, as inputs, the transactional object model description, a focal point identifier identifying information in the transactional object model as a focal point, and mapping information indicative of a mapping between entities in the transactional object model and a persistent data store.

21.(Currently Amended) The ~~architecture-system~~ of claim 20 wherein the runtime component navigation service comprises:

a plurality of data-navigation providers each associated with a specific type of navigation;  
a navigation service layer configured to transmit a navigation service request to one or more of the data-navigation providers; and  
a metadata service for providing the plurality of data-navigation providers with access to a metadata store, each data-navigation provider being configured to respond to a received data navigation request by interacting with the metadata service to identify at least one data navigation path.

22.(Currently Amended) The ~~architecture-system~~ of claim 21 wherein at least one of the plurality of data-navigation providers is associated with navigation from aggregated data to related transaction data.

23. (Currently Amended) The ~~architecture-system~~ of claim 21 wherein at least one of the plurality of data-navigation providers is associated with navigation from transaction data to related aggregated data.

24. (Currently Amended) The ~~architecture-system~~ of claim 21 wherein at least one of the plurality of data-navigation providers is associated with navigation between two data units that share a dimension.

25. (Currently Amended) The ~~architecture-system~~ of claim 21 wherein at least one of the plurality of data-navigation providers is associated with hierarchical navigation through collections of data that are hierarchically organized.

26. (Currently Amended) The architecture of claim 21 wherein at least one of the plurality of data-navigation providers is associated with navigation between two data collections that the user has identified as related.